

Appl. No. 10/726,292
Amdt. Dated October 27, 2004
Reply to Office Action of July 27, 2004

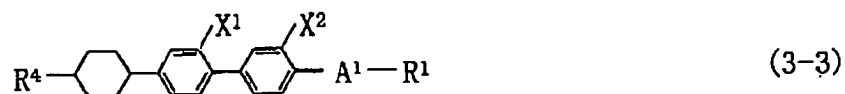
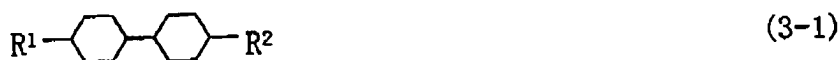
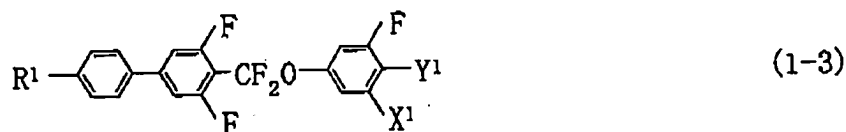
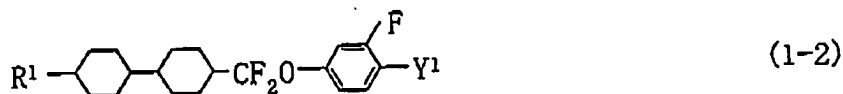
Attorney Docket No. 19629.0002
Customer No.: 26021

Listing of Claims:

1. (Original) A liquid crystal composition comprising at least one compound selected from the group of compounds represented by formulas (1-1), (1-2), and (1-3) as a first component, at least one compound selected from the group of compounds represented by formula (2) as a second component, and at least one compound selected from the group of compounds represented by formulas (3-1), (3-2), and (3-3) as a third component:

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wherein, R¹ is alkyl; R² is alkyl or alkenyl in which one or more hydrogens may be replaced by fluorine; R³ is alkyl or alkoxy; R⁴ is alkyl or alkoxymethyl; R⁵ is alkyl or alkenyl; A¹ is 1,4-cyclohexylene or 1,4-phenylene; Z¹ is a single bond or -COO-; X¹ and X² are independently hydrogen or

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fluorine; and Y¹ is fluorine or -OCF₃.

2. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-1).

3. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-1) and at least one compound selected from the group of compounds represented by formula (1-2).

4. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-1) and at least one compound selected from the group of compounds represented by formula (1-3).

5. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-1), at least one compound selected from the group of compounds represented by formula (1-2), and at least one compound selected from the group of compounds represented by formula (1-3).

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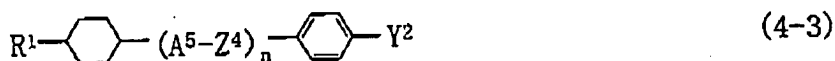
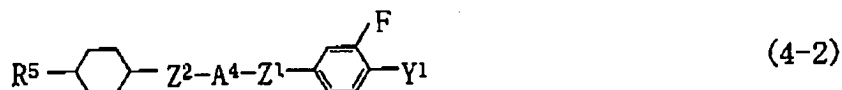
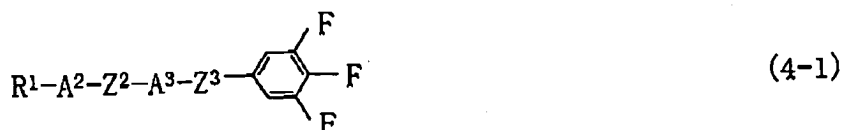
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6. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-2).
7. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-2) and at least one compound selected from the group of compounds represented by formula (1-3).
8. (Original) The liquid crystal composition according to claim 1, wherein the first component is at least one compound selected from the group of compounds represented by formula (1-3).
9. (Original) The liquid crystal composition according to claim 1 which comprises from 5 to 50% by weight of the first component, from 5 to 40% by weight of the second component, and from 10 to 70% by weight of the third component, each based on the total weight of the composition.

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10. (Original) The liquid crystal composition according to claim 1 which further comprises at least one compound selected from the group of compounds represented by formulas (4-1), (4-2), (4-3), and (4-4) as a fourth component:

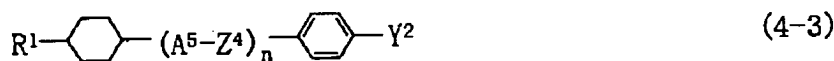
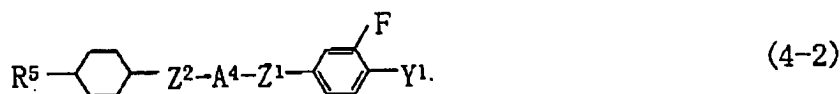


wherein, R^1 is alkyl; R^3 is alkyl or alkoxy; R^5 is alkyl or alkenyl; A^2 is 1,4-cyclohexylene or 1,3-dioxane-2,5-diyl; A^3 is 1,4-cyclohexylene, 1,4-phenylene, 1,3-dioxane-2,5-diyl, or 3-fluoro-1,4-phenylene; A^4 is 1,4-cyclohexylene, 1,4-phenylene, or 3,5-difluoro-1,4-phenylene; A^5 is 1,4-cyclohexylene or 3-fluoro-1,4-phenylene; Z^1 is a single bond or $-\text{COO}-$; Z^2 is a single bond or $-(\text{CH}_2)_2-$; Z^3 is a single bond, $-\text{COO}-$, $-(\text{CH}_2)_2-$, or $-\text{CF}_2\text{O}-$; Z^4 is a single bond, $-\text{COO}-$, or $-(\text{CH}_2)_2-$; Y^1 is fluorine or $-\text{OCF}_3$; Y^2 is fluorine, chlorine, or $-\text{OCF}_3$; and n is 0 or 1.

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11. (Original) The liquid crystal composition according to claim 9 which further comprises at least one compound selected from the group of compounds represented by formulas (4-1), (4-2), (4-3), and (4-4) as a fourth component:



wherein, R^1 is alkyl; R^3 is alkyl or alkoxy; R^5 is alkyl or alkenyl; A^2 is 1,4-cyclohexylene or 1,3-dioxane-2,5-diyl; A^3 is 1,4-cyclohexylene, 1,4-phenylene, 1,3-dioxane-2,5-diyl, or 3-fluoro-1,4-phenylene; A^4 is 1,4-cyclohexylene, 1,4-phenylene, or 3,5-difluoro-1,4-phenylene; A^5 is 1,4-cyclohexylene or 3-fluoro-1,4-phenylene; Z^1 is a single bond or $-\text{COO}-$; Z^2 is a single bond or $-(\text{CH}_2)_2-$; Z^3 is a single bond, $-\text{COO}-$, $-(\text{CH}_2)_2-$, or $-\text{CF}_2\text{O}-$; Z^4 is a single bond, $-\text{COO}-$, or $-(\text{CH}_2)_2-$; Y^1 is fluorine or $-\text{OCF}_3$; Y^2 is fluorine, chlorine, or $-\text{OCF}_3$; and n is 0 or 1.

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12. (Original) The liquid crystal composition according to claim 10 which comprises from 1 to 50% by weight of the fourth component, based on the total weight of the composition.

13. (Original) The liquid crystal composition according to claim 11 which comprises from 1 to 50% by weight of the fourth component, based on the total weight of the composition.

14. (Original) A liquid crystal display element comprising the liquid crystal composition according to any one of claims 1 to 13.

15. (Original) The liquid crystal display element according to claim 14, wherein the liquid crystal display element is an AM element of an IPS mode.